I claim:

1. A method for monitoring the light-off performance of a catalytic converter system in the exhaust gas duct of an internal combustion engine, comprising the steps of:

- feeding an air/fuel mixture to the catalytic converter system,

- evaluating the light-off performance on the basis of the conversion capacity in a light-off area of the exhaust gas catalytic converter system substantially influencing the emissions of the engine running hot,

- using a quantity of heat input fed with the exhaust gas to the light-off area during hot running up to a point in time as a criterion for successive conversion (light-off) in the downstream consecutive subvolumes of the light-off area, and

- individually testing and evaluating the functional capabilities of at least one of the downstream subvolumes heated consecutively at the respective moment of the light-off.

2. The method according to claim 1, comprising the steps of:

- at least at one of the points in time at which a predefined quantity of heat input is reached and a light-off of the corresponding subvolumes can be taken as a starting basis, feeding the catalytic converter system with a defined rich quantity of exhaust gas during lean hot running,
- checking the exhaust gas by means of an operational exhaust gas oxygen probe arranged downstream in the vicinity of the light-off area on starting the conversion, and
- on the basis of the effects of the supply of the defined rich quantities of exhaust gas at the corresponding points in time on the exhaust gas lambda, evaluating the functional capabilities of at least one subvolume of the light-off area.

3. The method according to claim 2, wherein during the hot running process, the functional capabilities of at least two equally-sized downstream consecutive subvolumes is tested one after the other in the given order, while the catalytic converter system at the consecutive points in time of the light-off of at least two subvolumes is in each case fed with a rich quantity of exhaust gas depending on the quantity of heat input at the specific point in time.

4. The method according to claim 3, wherein for evaluating the functional capabilities of a specific subvolume, should the exhaust gas lambda not remain lean during the passage of a defined quantity of exhaust gas, the length in time of the rich exhaust gas lambda signal can be used to evaluate the functional capabilities of the subvolume.

5. The method according to claim 3, wherein the rich quantity of exhaust gas provided for examining a specific subvolume can, depending on the result of the evaluation of the upstream subvolume to be examined, specifically be selected in such a way that when a quantity m of the upstream subvolumes were evaluated as operable, a rich quantity of exhaust gas is sent to examine the specific subvolume that is measured in such a way that m+1 lighted-off and operable subvolumes ought to be present to keep the resulting exhaust gas lambda lean.

6. The method according to claim 2, wherein the catalytic converter system, at the point in time when there is a quantity of heat input that is sufficient for the light-off of first only the downstream first subvolume, is fed with a rich quantity of exhaust gas matching the first subvolume and wherein the hot running when the exhaust gas lambda remains lean is evaluated as positively closed and when the exhaust gas lambda becomes rich, in the next hot running, a quantity of heat input results that is sufficient for the light-off of only the first two subvolumes that are mainly equally large whereupon a rich quantity of exhaust gas matching a subvolume is sent to the

catalytic converter system so that the downstream consecutive subvolumes of the light-off area can be checked in succession in consecutive hot running processes while, in the preceding hot running processes, the first up to nth subvolume were evaluated as non-operable and there is in the (n+1)th hot running a quantity of heat input that is sufficient for the first up to (n+1)th subvolume and a rich quantity of exhaust gas matching a subvolume is then sent to the catalytic converter system.

7. The method according to claim 1, wherein a binary exhaust gas oxygen probe is used to monitor the light-off performance.

8. The method according to claim 1, wherein the defined input of rich quantities of exhaust gas is controlled by means of a linear exhaust gas oxygen probe arranged upstream of the catalytic converter system.

9. The method according to claim 1, wherein the lambda probes of a phase catalytic converter controlled by 3-lambda probe controls are used for monitoring the light-off performance and the conversion capacity of a phase catalytic converter, wherein a linear primary catalytic converter lambda probe, a first binary lambda probe arranged between the primary and main catalytic converter to serve as monitor of the light-off performance and a second binary lambda probe arranged downstream of the phase catalytic converter to serve as monitor of the conversion capacity of the phase catalytic converter are provided.

10. The method according to claim 1, wherein the method can be used within the framework of an on-board diagnosis and/or as a workshop diagnosis.